

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method for preparing a double glazing unit, which ~~comprises~~ the method including supporting two glass sheets so as to maintain a certain gap therebetween, and injecting a resin material from a die to form a resin spacer in a peripheral edge between the two glass sheets while relatively moving the two glass sheets and the die so as to move the die along the peripheral edge between the two glass sheets, the die injecting the resin material in a certain sectional shape[[:]], the method comprising:

providing the die between a first mechanical stage and a second mechanical stage, the first mechanical stage having the two glass sheets put thereon first before forming the resin spacer, the second mechanical stage having the two glass sheets transferred thereon next;

providing the first mechanical stage with a first guide ~~for guiding~~ configured to guide the two glass sheets in a horizontal direction parallel to a glass sheet surface, providing the second mechanical stage with a second guide ~~for guiding~~ configured to guide the two glass sheets in the horizontal direction parallel to the glass sheet surface and, putting lower edge surfaces of the glass sheets ~~[[on]]~~ of the first mechanical stage on the first guide, and putting the lower edge surfaces of the glass sheets on the second mechanical stage on the second guide;

providing the first mechanical stage with a first holder in touch with faces of the two glass sheets that do not confront each other, providing the second mechanical stage with a second holder in touch with the faces of the two glass sheets that do not confront each other, and maintaining the certain gap before and/or during forming the resin spacer by supporting the two glass sheets on the first mechanical stage in substantially vertical fashion by the first

holder and supporting the two glass sheets on the second mechanical stage in substantially vertical fashion by the second holder;

carrying out a horizontal movement component of the said relative movement by horizontally moving the two glass sheets in the horizontal direction parallel to the glass sheet surface between the first mechanical stage and the second mechanical stage; and

carrying out a vertical component movement of the said relative movement by vertically moving the die in a vertical direction, wherein

when the two glass sheets are on the first mechanical stage, the two glass sheets have at least vertical portions close to the second mechanical stage which are sucked, and

when the two glass sheets are on the second mechanical stage, the two glass sheets have at least vertical portions close to the first mechanical stage which are sucked.

Claim 2 (Currently Amended): The method for preparing a double glazing unit according to claim 1, wherein the relative movement comprises:

movement (A) for reciprocating the two glass sheets in the horizontal direction parallel to the glass sheet surface between the first mechanical stage and the second mechanical stage, and

movement (B) for moving the die in the vertical direction, and wherein

the movement (A) and the movement (B) are alternately carried out twice to form the spacer in horizontal edge portions of the peripheral edge between the glass sheets during movement between the first mechanical stage and the second mechanical stage and to move the die so as to form the spacer in vertical edge portions of the peripheral edge between the glass sheets during halts of the two glass sheets on the first mechanical stage or the second mechanical stage, thereby forming the spacer throughout the peripheral edge of the two glass

sheets.

Claim 3 (Currently Amended): The method for preparing a double glazing unit according to claim 2, wherein the relative movement and the forming of the spacer are carried out in the following order:

positioning a vertical edge portion between the two glass sheets close to the second mechanical stage along a vertical line of the die by the movement (A);

halting the horizontal movement of the two glass sheets;

forming the spacer in the vertical edge portion close to the second mechanical stage by the movement (B);

halting the movement of the die in the vertical direction;

forming the spacer in a horizontal edge portion between the two glass sheets by the movement (A);

positioning a vertical edge portion between the two glass sheets close to the first mechanical stage along the vertical line of the die;

halting the horizontal movement of the two glass sheets;

forming the spacer in the vertical edge portion close to the first mechanical stage by the movement (B);

halting the movement of the die in the vertical direction; and

forming the spacer in a horizontal edge portion between the two glass sheets by the movement (A).

Claim 4 (Currently Amended): The method for preparing a double glazing unit according to claim 1, wherein

the second holder includes a suction type pushing and pulling device on the second mechanical stage, the suction type pushing and pulling device sucking and holding the faces of the glass sheets that do not confront each other; and

the suction type pushing and pulling device moves in the horizontal direction parallel to the glass sheet surface to move the two glass sheets in the horizontal direction parallel to the glass sheet surface between the first mechanical stage and the second mechanical stage.

Claim 5 (Currently Amended): The method for preparing a double glazing unit according to claim 4, wherein

the suction type pushing and pulling device sucks and holds portions of the lower edges of the two glass sheets close to the second mechanical stage, and

the suction type pushing and pulling device reciprocates in a region of the second mechanical stage to move the two glass sheets in the horizontal direction parallel to the glass sheet surface.

Claim 6 (Currently Amended): A method for preparing a double glazing unit, which comprises ~~the method including~~ supporting two glass sheets so as to maintain a certain gap therebetween, and injecting a resin material from a die to form a resin spacer in a peripheral edge between the two glass sheets while relatively moving the two glass sheets and the die so as to move the die along the peripheral edge between the two glass sheets, the die injecting the resin material in a certain sectional shape[[]], the method comprising:

providing the die between a first mechanical stage and a second mechanical stage, the first mechanical stage having the two glass sheets put thereon first before forming the resin spacer, the second mechanical stage having the two glass sheets transferred thereon next;

making up the relative movement by movement (A) for reciprocating the two glass sheets in a horizontal direction parallel to a glass sheet surface between the first mechanical stage and the second mechanical stage, and movement (B) for moving the die in a vertical direction;

supporting lower edge surfaces of the two glass sheets on the first mechanical stage and supporting the two glass sheets on the first mechanical stage in substantially vertical fashion while maintaining a certain gap between the two glass sheets by sucking at least vertical portions close to the second mechanical stage, the vertical portions ~~located~~ located on faces of the two glass sheets that do not confront each other, supporting lower edge surfaces of the two glass sheets on the second mechanical stage and supporting the two glass sheets on the second mechanical stage in substantially vertical fashion while maintaining the certain gap between the two glass sheets by sucking at least vertical portions close to the first mechanical stage, the vertical portions ~~located~~ located on the faces of the two glass sheets that do not confront each other, during the movement (A); and

forming the spacer in horizontal edge portions of the peripheral edge between the glass sheets during movement between the first mechanical stage and the second mechanical stage by carrying out alternately the movement (A) and the movement (B) twice, and forming the spacer in vertical edge portions of the peripheral edge between the glass sheets to form the spacer throughout the peripheral edge between the two glass sheets by moving the die during halts of the two glass sheets on the first mechanical stage or the second mechanical stage, wherein

when the two glass sheets are on the first mechanical stage, the two glass sheets have at least vertical portions close to the second mechanical stage which are sucked, and

when the two glass sheets are on the second mechanical stage, the two glass sheets have at least vertical portions close to the first mechanical stage which are sucked.

Claim 7 (Currently Amended): An apparatus for preparing a double glazing unit, which ~~comprises the apparatus including~~ a die for injecting a resin material in a certain sectional shape, and a moving device for relatively moving the die and two glass sheets so as to move the die along a peripheral edge between the two glass sheets while supporting the two glass sheets so as to maintain a certain gap therebetween, and wherein a resin spacer is formed in the peripheral edge between the two glass sheets by carrying out the relative movement and injecting the resin material from the die; the apparatus comprising:

a first mechanical stage; and

a second mechanical stage, wherein

the first mechanical stage ~~having is configured to have~~ the two glass sheets put thereon first before forming the resin spacer, the second mechanical stage ~~having is configured to have~~ the two glass sheets transferred thereon next, and the die is movably provided between the first mechanical stage and the second mechanical stage in a vertical direction;

the moving device ~~including~~ includes

a first guide provided on the first mechanical stage, said first guide configured to support for supporting lower edge surfaces of the glass sheets and guiding to guide the glass sheets in a horizontal direction parallel to a glass sheet surface, and

a second guide provided on the second mechanical stage, said second guide configured to support for supporting the lower edge surfaces of the glass sheets and

~~guiding to guide~~ the glass sheets in the horizontal direction parallel to the glass sheet surface and,

a first holder is provided on the first mechanical stage and is in touch with faces of the two glass sheets that do not confront each other, and a second holder is provided on the second mechanical stage and is in touch with the faces of the two glass sheets that do not confront each other;

~~wherein the two glass sheets are moved in the horizontal direction parallel to the glass sheet surface and between the first mechanical stage and the second mechanical stage to carry out horizontal movement of the relative movement while maintaining the certain gap, before and/or during forming the resin spacer, by supporting the two glass sheets on the first mechanical stage in substantially vertical fashion by the first holder and supporting the two glass sheets on the second mechanical stage in substantially vertical fashion by the second holder; and~~

~~wherein the die is moved in the vertical direction to carry out vertical movement of the relative movement, and the first and second holders are arranged so that~~

when the two glass sheets are on the first mechanical stage, the two glass sheets have at least vertical portions close to the second mechanical stage sucked, and

when the two glass sheets are on the second mechanical stage, the two glass sheets have at least vertical portions close to the first mechanical stage sucked.

Claim 8 (Currently Amended): The apparatus for preparing a double glazing unit according to claim 7, wherein the relative movement comprises:

movement (A) for reciprocating the two glass sheets in the horizontal direction parallel to the glass sheet surface between the first mechanical stage and the second mechanical stage, and

movement (B) for moving the die in the vertical direction, ~~and wherein~~

the movement (A) and the movement (B) ~~is~~are alternately carried out twice to form the spacer throughout the peripheral edge between the glass sheets,

the holder maintains the certain gap between the two glass sheets on the first mechanical stage,

the spacer is formed in horizontal edge portions of the peripheral edge between the glass sheets during movement between the first mechanical stage and the second mechanical stage, and

the die is moved to form the spacer in vertical edge portions of the peripheral edge between the glass sheets during halts of the two glass sheets on the first mechanical stage or the second mechanical stage.

Claim 9 (Currently Amended): The apparatus for preparing a double glazing unit according to claim 7, wherein the second holder ~~includes~~comprises:

a suction type pushing and pulling device for pushing and pulling the two glass sheets between the first mechanical stage and the second mechanical stage, the suction type pushing and pulling device ~~comprises including~~ a liner guide provided in parallel to a moving direction of the glass sheets under the second guide,

a sucking frame movable along the liner guide, and

confronted suction chucks provided so as to suck the faces of the two glass sheets that do not confront each other.



Claim 10 (Currently Amended): The apparatus for preparing a double glazing unit according to claim 9, wherein

the suction chucks are configured to suck and hold portions of lower edges of the two glass sheets close to the second mechanical stage, and

the suction type pushing and pulling device is reciprocative in a region of the second mechanical stage.

Claim 11 (Currently Amended): The apparatus for preparing a double glazing unit according to claim 7, wherein

a pair of suckers are provided on the second mechanical stage in the vicinity of the die to extend in the vertical direction so as to suck the faces opposite to the confronted faces of the two glass sheets.

Claim 12 (Currently Amended): The apparatus for preparing a double glazing unit according to claim 7, wherein

a pair of suckers are provided on the first mechanical stage in the vicinity of the die to extend in the vertical direction so as to suck the faces opposite to the confronted faces of the two glass sheets.

IN THE DRAWINGS

The attached sheets of drawings include changes to Figures 15-17. These sheets, which include Figures 15-17, replace the original sheets including Figures 15-17.

Attachment: Replacement Sheets